P4PP4eCPc PTPVAFPUc

Δ^{α} (abiotic)

ው Δ ጋ Δ ° Δ ° δ ° ለዖናልኦላ° Δ ግቦ'ጋ% ለረL୬% ርካታ ው Δ ው ለውረተላ% ለዖናዖ° Δ ግቦ'ጋ% ላላበ ካልረተላ% ለዖናዖ° Δ ግቦ'ጋ° δ 6, ለጎ Δ 6 ላተ Δ 9 ው Δ 7 ለኦካ Δ 6 ኦኦናካ Δ 6.

An abiotic environment refers to the non-living natural environment made up of things such as air, water, snow, ice, permafrost, soil, rocks, and minerals.

PC₁₽¹PC (Acids)

ፅልሃሁኦሁሎጋኈ 'b/ሮሲጐጋσ. σ'የውና Δርቦሃኦ/ጐ ልσሁ ኦርናሲጐ>ኈ. ኣኈኄቦσኄቦና ላንኦቦ/ትህኈኄቦኑLC. Δርኄቦና ኦርናሲኈጋና ኦልσኄቦ ኦበናበናረላዖኈሲኈ>ና ላኑLጋ Δርኄቦና ኣልናሃኄσቴ ላኦቴበናበረኈሲኈጋበቴ. ኦርናሲኈጋና ላጋኈርኦ/ትህዎና ኦሃናኄσላኈጋσቴ ኣልናሃኄσላዖርኦናጋበቴ.

A type of substance, usually liquid, that tastes sour. For example, vinegar is an acid. Acids have a range of strengths. Some acids can seriously burn your skin and dissolve metals. Acids are used in the mining industry to extract metals.

プログログログログログログログ (Airborne Contaminants)

Contaminants that are transported long distances by air currents are called airborne contaminants. Most of the organochlorines (Ocs), heavy metals, and radionuclides can be airborne contaminants, although the distances they can travel differs.

በГ▷< ⊲⁰•□▷Lን≺በኈቦና (Anti-infectious Agents)

 $PPOD^{\bullet}\Delta^{\circ}\Delta^{\circ}$ $\Delta \Delta^{\circ}$ ΔD° Δ° Δ° Δ° Δ°

Substances in a person's body that provide protection from diseases caused by germs in the body.

PPP^{ና6}C^{ና6}D¹J^c Γ**4**⁶σሊσ^{ና6} ⁶b>L⁶α/**4**^cN⁴C▷4^c Arctic Monitoring and Assessment Program (AMAP)

▶₽₽%С%ጋΓና Γάσησή ΊδΡλΙ αλάγηαϊσή αιμο ΊδρΔ
Λαηγηλή λαίκαι αρακή Ίδρλι ακόγος 1991α)
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Ααμονισή ἀφιρος τος 1991α)
(ΑΕΡΣάφιρλιση ἐρακος 1995 τος 1995

The Arctic Monitoring and Assessment Program (AMAP) is an international organization established in 1991 to implement the Arctic Environmental Protection Strategy (AEPS). AMAP's current objective is to provide reliable and sufficient information on the status of, and threats to, the Artcic environment, and to support Arctic governments in their efforts to remediate and prevent environmental contamination.

D^cbdCbペレンc DdCbdc (Archived)

ጋ%d% $C\dot{D}$ % ውሷCDትና የDDት\D1% D1%D2% ውሷD5% ውሷD5% ውሷD6% ውሷD7% ውሷD7% ውሷD8% ውሷD8% ውሷD9% ውሷD9

Archived samples are samples (usually organs or other parts of animals) that are stored, usually in freezers, for future analysis

∧シ∧ ◁∩₠ыつ₠ы ◁₽₫◁ 1260 (Aroclor 1260)

Aroclor 1260 is a type of polychlorinated biphenyl (PCB) marketed under the trade name Aroclor. The number indicates an average 60% chlorination.

⊃⁴d⁰•Q⁴b⊃⁴b (arsenic)

 Δ^{L}^{G} Δ^{G} Δ^{G}

Arsenic is a steel-grey metallic element that is found naturally in rocks and soil. When it combines with other elements, it can become poisonous, which makes it useful as an agricultural insecticide and poison. Arsenic can bioaccumulate in plants and animals.

Bequerels per gram (Bq .g-1)

DC50_56DG6 D6DSDA

A unit of measure for radiation

(ለንተ•ሚናьጋና) ኦውናь/ዊናርላልኦዊ•ው•ቦና (Bioaccumulation)

ᢐᡝᡕᡣ᠙᠒ᠮᡥᡥᠣ᠕᠌᠌ᢪᢦ<ᡩ᠋ᠵᡆᢐᢥ᠙᠐ᠰ<ᡩᠸᡆᢐᡥᡥ᠘ᢃ᠙᠘ᠳᡐ᠙ ᢐᡮᠬ᠙ᢐ᠋ᡊᢀᠲᡥ᠋᠘ᠮᡥᠵ᠙ᡤ᠋᠘ᡥᢣᡐᠯᠳ᠈ᠯᡲᡆᢣᡆᡥᠫᡄᡃᠮᢀ᠘ᡫᢐᡆ ᠘ᠮᡈᠯ᠋ᡆᢪᠾ᠘ᡏᢐᡥᡥ᠘᠙᠘ᠮ᠘᠘ᠮᡈᠯᡆᡣᡅ᠂ᡥ᠍ᡉ᠘᠘ᠮᢐᡥᡥ᠌᠘᠖ᡆ᠘ᢣᢂᢞᡆᡥᡥ᠙ᢅᠫ ᢐᠮᠯᠬᠦᠮ

The build-up or storage of substances (contaminants) in the bodies of animals over time as the animals continue to eat food or drink water containing the contaminant. Contaminants that bioaccumulate are very slow to change or do not change to a form that can be digested and eliminated by the animal.

(/> የትርር (Biomagnification)

ᠳᡝᡰᠬ ᠣᡅᠨᠣ ᠰ᠌᠌᠌ᡥ᠋᠌᠌ᠵ᠖ᠳᡲᡰᡣ᠋ᢑᡠᡕ᠂ᠳᡅᡲᢐᢣ᠌᠌᠙ᢞ᠋ᢗ᠂ᢅᡰᢃᢗᠪ᠊ᡥᡆ᠌ᡥ᠑ᠳ ᢐ᠋ᡊᢣᡲ᠋ᡶᡠᡃ᠑ᠳᡃ᠂ᠳᡝᡲᠬ᠙ᠳᡝᡕᠬ᠌᠌ᠪᡟᡉᡣᡗᡲᠣ᠍ᢀᠳᡲ᠙ᡃᢐ᠉ᢅ᠘ᢃ᠙᠐ᢞᡆᢩ᠂ᠳᡲᡗᠣ ᢣᡥᡎᡴᡄᢨᠧ᠌᠊ᡆᡟᡶᠬᢝᡅᡕᢗ᠂ᡆᡲᢇᡳᠧᢨᠧᡆᡧᢛ᠈ᢅᡖᡲᡥᠣ᠍᠈ᠣᡲᠯᡣᠦ᠂ᠳᡅᡝᢐᢗ᠌᠌᠐ᡣᢣᠦ.

When an animal eats a plant or another animal, it consumes all the contaminants stored in that food. Contaminants can biomagnify in animals that use other animals for food because the concentration increases with each step from prey to producer.

በГЈና Гላσሌኦ▷ኖናርላኖ▶ጋና (biomonitoring)

Biomonitoring is a method of testing and watching what happens to contaminants in living organisms. For example, parts of polar bears may be analyzed to biomonitor POPs in the Arctic marine environment.

$\Delta L^{\varsigma} = C P^{\varsigma} = 0$ $\Delta L^{\varsigma} = 0$ ΔL^{ς

Bromine is a naturally occurring element. It is a dense, deep reddish brown liquid that is easily vaporized into a brownish-red vapour. Metal bromides occur in small amounts in seawater and salt deposits as well as in water from mineral springs. One of the most common uses of bromine is in the manufacture of gasoline. Bromine compound are also widely used in pesticides and for treating plastic material and textiles to make them fireproof. When bromine reacts and combines with other substances, they become brominates.

Cadmium (Cd)

Cadmium is a type of heavy metal found naturally in soils and rocks. It is soft and has a silvery colour. It is often found with another metal called zinc. It is mined and used in some industries to make things such as batteries, some pesticides, some

types of paint, and certain parts of the equipment that makes nuclear power.

baCΓ ϷΡϷʹʹͼϹʹʹ϶ϽʹʹͰϹʹϫʹʹͼʹʹ϶ϽʹʹͼʹϲϲϭʹʹͿϲʹʹϧϷϷͰͰʹʹͼϹ Ϸϭ·ϧʹʹͰʹϲ 2 (Canadian Arctic contaminants assessment Report 2)Ϸʹα Ϸϭ·ϳͽϲʹϤϲͺ៸Ͱͺϟʹͼϧͺ ϹϪϧϷϘʹͼʹͳͺϟʹͼϧ ϷαͺϹΓ ϷΡϷʹʹͼͺϹʹͼʹ϶Ͻʹͼͺ

ʹͰϧϥϪͿʹͼͺʹͼʹ϶Ͻϲʹϲϭʹ;ͿϲʹʹϧϷϷͰͰʹͼʹϹϷʹͰͰϲϭ·Ͼ Ϸϭ·ϸϧʹͰϲʹ2, Ϸʹͼͺ

ϽͰϯϲͼʹϹϥͼʹͼʹ϶Ͻϲʹϲϭʹ;ͿϲʹʹϧϷϷͰͰʹͼʹϹϷʹͰͰϲϭ·ͼ ϹͰϽͰͿʹ·ͰͿʹͼͰͺϲʹͼʹ϶ϽϼϲʹϷͰϷϷʹͼʹͼ϶ϽΓ.

?αϹΓ ϷΡϷʹͼʹͼʹ϶Ͻʹͼͺ ϭͰϷͰͰϲʹϹʹϧͼʹͼʹ϶Ͻϲͼʹͼʹ϶ͰʹͼʹϷϷʹͰϲʹͼʹϷϽʹͼͺϹϷʹϷʹϲʹͼ ϷϲϷͰͰͼʹͼʹͼͺϹͰͿͼʹͼʹͼͺϹͰͿͼʹͼʹͼͺϹͰͿͼʹͼʹͼͺϹͰͿͼʹͼʹͼͺϹͰͿͼʹͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϹͰͿͼʹͼͺϷʹͰͼϹϷͰʹͼͺϷϷϷϷϭͼʹͼϲͰϲϭͼͺ(5) ΑʹϧϹϷʹϯϲͺϹʹͼͺϹͰͿͼʹͼʹ϶Ͻϲʹϲϲϭʹ϶ʹͿϲ

This report, also referred to as CACAR-II is a comprehensive assessment of contaminants in the Arctic. CACAR-II contains details results of all the research that was conducted since 1997 under Phase II of the NCP.

A disease that results in the disordered growth of the body's cells resulting in tumors (large masses of cells). It may be caused by exposure to certain substances, such as some kinds of contaminants.

ULP< Pri>Tinue (Cell)

▷L⁺לCÞל Γ₽⁰σჼ◊<▷¹¹

ΠΓΓ▷C¹. CLΔCĊĹ™

▷Lゼ, σづל

Λʔቕン¹

CΔLΔ⁴ンσ

¬Δ√L≫¹.
</p>

The smallest living unit in the body. All living things, animals and plants, are made up of cells.

Cesium-137 (Cs-137)

CLbdd cesium-137 Δ 2525 \alpha2556 \alpha2556 \alpha2556 \alpha4L2 \alpha556 \alpha566 \alpha5

Cesium-137 is a human-made radioactive element produced by the breaking up of uranium atoms in a nuclear power plant or in atomic weapons. It remains dangerous for a long time because the period of time it takes to lose half its radiation and change into a safer substance is 30 years. Cesium is an airborne contaminant.

4⁶b ¹ (Algae)

 Δ L'Γ ρ C° \wedge 2%)ናሩ θ በ% ሀናጋቡ \wedge 4% σ 4 ρ 8% σ 1% የላላ σ 4 ρ 2% σ 5% σ 6% σ 6% σ 7% σ 6% σ 7% σ 7% σ 7% σ 8% σ 9% σ

A type of plant that lives in the water but needs sunlight. Most alga are tiny in size, some such as kelp and seaweed, are made up of any cells. Algae make up most of the tiny floating plants in lakes and oceans. Most algae are green in colour, but others can be red, yellow, or orange.

/፭ጎዾሩ୮ (Chernobyl) בשלעביר אסיבילפיס>ב>ישלפיס (Chernobyl nuclear accident)

 $\Delta\Delta\Lambda$ ሲ 26, 1986ህበ'ጋЈ ኌህላΔናጋውና ▷፡L®dበ'ቴ'ል $^{\circ}$ ር 'ቴጋ'ቴሬ▷%' ಒኒላሪ 'ዕራና ውഫር 'ቴሪ'ት ይኖር ነት ይኖር

On April 26, 1986, an explosion occurred at the Nuclear power station near the city of Chernobyl, Russia. The accident resulted in the release of many radionuclides to the atmosphere. Cesium 137 was one of the radionuclides released to the air during this explosion.

'dለጥልነው' chlordane-ህσና CP (Chlordane)

An organochlorine (OC) pesticide made by humans to kill insects. It was used a lot in the 1960s and 1970s to kill cockroaches in

peoples' homes but it is not used very much any more. It is banned in Canada.

و دادیاد (chlorine) دے L۲۵۲ کے۔

ᠳᠴᡃ᠘ᡃᡪ᠘᠙᠘᠘ᠮ᠘᠂᠘ᢀ᠋ᢗ᠐ᡥᢗᢨᡎᡥ᠋ᡆᢧᢆᡰ,᠌᠌ᡝᡥᡆᡥ᠑ᠸᠣ᠑ᡀᡰᠻᠵᡛ᠑ᠳ ᠮᠪᡟᡟᢇᠯ᠌ᠣ᠆᠘ᢘᡃᡐ᠘ᡶᢝ᠂ᡠᠰ᠌ᢇ᠘ᢣᠣᢗᢨ᠌ᠣᠣ᠘᠘ᠮᠳ, ᢣᠴᡟ᠘ᡃᢥᠺ᠙᠂ᡐ᠘ᠴ ᢣᡆᢣᠪᠵ᠘ᢞᠳ᠘᠋ᢗ᠐ᡥᢗᠪ᠙ᡃ᠑ᡃᠣ᠂᠌ᢧ᠘ᠪ᠘ᡶᢝ᠘ᡩ ᠘᠘ᠮ᠋ᠴᡄ᠌ᢇ᠋ᡴᢉ᠘᠘ᡊᡮᢗᢨ᠋ᠦ. ᠰᢗᠻᠦᡄ᠌ᢞᢛ᠘ᡆᠮᢗᠬᡅᠪᡀᡃᢅᠴᠦ, ᢗᡃ᠘ᡥᡏᢗᠬ᠘ᢞ ᠘᠘ᡀᠣᢅᠣᡕ

Chlorine is a naturally occurring, poisonous greenish-yellow non-metallic gas used to purify water, for bleaching, and in the manufacture of many organic chemicals. It occurs naturally only as a component of salt, e.g. in sea water.

ŹbˤьC▷ל⁰Ⴍˤьጋσь ላላሲ∿ሁኦሲላ亡ь (consumption advisories)

σπλοληδίιδιο ολίηςηλορφος Δέθσθα Ουθων βαση αφορώνης υκεριώνης αθουτημένος αθτοσίδο από τος από

Food consumption advisories are sometimes issued by the territorial government health departments in consultation with Health Canada when they determine that the level of contaminants in traditional/country foods may pose risk to the health of people who eat this food. Such an advisory may recommend, for example, that people should only eat a certain number of livers from a particular fish species in a year.

[∠]P√[₹]•□^C (Contaminant)

A substance that is found in a place where it should not be. This does not necessarily mean that is it harmful, but depending on what it is and the amount that is present, it may be.

DDT-%~5%CD-4c (DDT)

DDT-ህσናჼር እተና ውህ በ ሥር ው ነና ነጋ መተር ላናር ላን ነና አይ አን ነር እነን ነ 1940 ነና መተር መተር ነና ነር እነን ነር እነን

DDT stands for dichlorodiphenyltrichloroethane. DDT is an organochlorine (OC) pesticide developed in the 1940s to kill lice and to kill biting insects that carry diseases such as: malaria, yellow fever, and typhus. DDT was heavily used as a pesticide to kill insects that fed on farmers' crops in the 1950s and 1960s in the Great Lakes region until it was found to be harmful to other forms of life. DDT is banned in Canada.

D'd°a-G'DC/NCÞS/C (dioxins/furans)

 $5'6^{\circ}$ 5'' $5'6^{\circ}$ $5'6^{$

Dioxins and furans are highly toxic chemical substances. Dioxins and furans are known to cause serious health problems, including cancer, in laboratory animals. The biggest source of dioxins and furans in Canada is from the large-scale burning of municipal waste.

Þሲርና6ጋ6ካናልልውና (Distant Early Warning (DEW) line)

CL⁶dd ÞaC⁶D⁶56&&&c 58-⁶df ഛa⁶⁶ddNu հσJ⁶i⁶ 70-⁶læc⁶C baCÞ⁶ Þ₽Þ⁶C⁶D⁶læ հa⁶ÞÞædf 1955 d⁶Læ 1957 dd⁶æ⁶P⁶æ. dΓ/f⁶c Δω⁶P⁶æ⁶f⁶C⁶D⁶.

The DEW line is a series of 58 military radar stations located at the 70th parallel (latitude 70 North) in northern Canada built between 1955 and 1957. Many of the stations are now abandoned.

Δርናdረናь/ኈቦᅆ፞፞ኇ (Deformities)

Unnatural physical features or abnormalities found in animals or plants.

ጭር ተመመር የተመሰው የ

ᡃᠪᠦᡶ᠍᠋ᠨᡣᢉᢞᡆᢩᡥᡳᢗᡳ᠕ᢣ᠘ᢟᡥ᠂ᢗᡃᢐ᠋ᡆᡥᠾ᠂ᠪᢅᡶᡲᡳᠬ᠕ᡃᢐᡥᡥ᠌ᠣ᠂ᠳᡃᡕᡣᡳ᠕ᢣ᠘ᢆ ᠕ᡔᡥ᠌ᠫᡕ᠂ᡏ᠘ᠫᡝ᠌᠌ᢀᡃᢗ᠌᠌᠌ᢧᠠ᠘ᢃ᠘᠖᠂ᠪᠣᡶ᠘ᡆᡥ᠌᠌᠑ᡏᡕ

Disease resistance refers to the ability of animals and plants to withstand the attack of the disease.

C∿ቦ亡ና "Δ⊲∟ህσናናьС⊳≺ና" (Elements)

 $\Delta CDCD + BCDCD + ACCOUNTS + BCDCD +$

A natural substance that cannot be broken down or separated into parts. For example, gold is an element: It contains nothing but gold. Water is not an element: it is made up of 2 elements, the gas hydrogen and the gas oxygen. Most elements are either gases or minerals. There are 103 elements, which combine in various ways to form everything in the world.

ĎLマ᠋᠆ﻪᢗና Ϥ≪በΓϷϹϪ·ϽͺͺϤʹͼϧϷϧϧͼϧϒͳͼϼϢͺͺͼcosystem)

An ecosytem is a system that is formed by the interactions of organisms with their non-living environment. The organisms with their non-living environment. The organisms and the environment work together as a unit, called an ecological unit.

ΔωΔ^ςD^ςb Pγ^cωσ (element)

A natural substance that cannot be separated into smaller parts. For example, gold is an element; it contains nothing but gold. Water is not an element; it is made up of two elements, the gashydrogen and the gas-oxygen. Most elements are either gases or minerals. There are 109 elements, which combine in various ways to form everything in the world.

dLΔל⊳∩ (endosulfan)

 $\mathsf{dL}\Delta \mathsf{D} \wedge \mathsf{C} \wedge \mathsf{D} \wedge \mathsf{C} \wedge \mathsf{D} \wedge \mathsf{C} \wedge \mathsf{D} \wedge$

Endosulfan is a POP generally used as an insecticide in the control of crop insects and mites

▶⁵**b √Fb √POPO** (fatty acid)

 >ΔΙΑ΄
 ΔΦ
 ΦΦ
 ΦΠ
 ΘΕ
 <t

Fats are combinations of saturated (unhealthy) and unsaturated (healthy) fatty acids. The "essential" fatty acids (omega-3 and omega-6) are not made by the body and must be obtained from food. Omega-3 fatty acid (fish oil) is a healthy type of fat found in seafood, particularly fish that is fatty. Omega-6 is important for the growth and development of infants. Fatty acids help to control blood pressure, blood clotting, inflammation, and other body functions.

$\Delta^{c} \triangle^{5b} / \alpha^{5} \triangle^{5b}$ (Fetus)

The unborn young of an animal or human that is still inside the womb of the mother.

σናρሶናЬናC⊳በ⊀ና (Food chain)

Plants and animals can be linked together in feeding relationships called food chains. At the bottom of food chains are green plants that convert sunlight into food energy for the rest of the chain. Animals that eat the plants are then eaten by another animal, and so on up the chain. The number of animals involved can vary. For example, in the north, the lichen - caribou - human food chain has fewer feeding links, and is much shorter than the algae - fish - seal - polar bear - human food chain. In nature, food chains overlap to form food webs.

σናΡΓ⊁⊳≺ና **⊲**ናCσ∿Րና (Food web)

δουτοινός συμποιώς συμποιώς ο συμποιώς συμποιώς.

A series of connected food chains.

ለጉተኈውና ላልናጋልውና ጋናርው bd (Grasshopper effect)

CL°a " Λ^{\downarrow} CC%) Δ^{\downarrow} D'\$ Δ^{\downarrow} D'\$ CPN σ^{\downarrow} " Δ^{\downarrow} D Δ^{\downarrow} D'\$ $\Delta^$

The "grasshopper effect" explains the series of 'hops' of certain contaminants that re transported to the Canadian north from warmer regions of the globe. Some contaminants, including organochlorines, evaporate at warmer temperatures and are transported in the winds and clouds until they reach cooler temperatures where they condense back to earth. Once back on

land, they may evaporate again to the air when temperatures rise, be transported through the air, and re-condense when the temperatures become cooler. Since the major air currents in the northern part of the earth tend to move towards the Arctic, it means that these contaminants are eventually carried to the Canadian north through the 'hops' of evaporation-transportation-condensation.

C/ናላላህ σ ና 5 C 5 C

C'CL' C''\d': 'Λρλ\θσςιοςοςος, Γ'', Ηρςο, Δρλ, ΔιΔ Δ''Cλρ, Δβ'σθισςος Δ''', ΔΓΔςος ΔιΔ ΔΓΔςος.

The five great lakes include: Superior, Huron, Michigan, Erie, and Ontario, are located between southern Ontario and the northern United States.

% Guidelines (Guidelines)

A recommended limit for a substance or an agent in environmental media (air, water, sediment, soil, food, people) that is estimated to be safe and is intended to protect human health or the environment. It is not legally enforceable.

A study that calculates the amount of contaminant in a food and compares that to the amount of contaminant that we know is safe to eat over a lifetime.

Þˤdንº∿ቦናጋና ኣልናን▷ኣንΔና (Heavy Metals)

CL⁶dd ΔαλΓ⁶⁶·ιίσσε -CL⁵λρΓρε \αςλΔε ασλρε⁶σσε ρλ⁶⁶bσ Δα CL⁶α /ςρηγιωσ⁶⁶Γε Γρσηγώσ ε ερωδορηγώε. CL⁵λ γς⁶ηρη⁶⁶Γες CΔιΔ⁶σ⁶υωε αεηγιαθηρ⁶αες μο Δω¹ε η Αργρασε. Cl⁵λ γς⁵λ ή⁶⁰ς CΔιΔ⁶συωε αεηγείουε. γε απολεί απο Διαερσός αερλος Αδιωδος ανιω απολεί απολε These are naturally-occurring metals that are found in rocks and soils that do not break down into smaller elements. Heavy metals can also be released to the environment by human activities. They generally do not break down and therefore persists in the environment. Examples of heavy metals are: mercury, cadmium and lead.

$44\sqrt{4}$

Hexachlorocyclohexane (HCH) is a POP used to kill insects (insecticide). It does not break down easily in the environment, and can be transported great distances in the atmosphere.

ԻՐԻ (inorganic)

Inorganic material is inanimate (e.g. non-living) in nature and makes up the abiotic environment.

'dሉምው' ጋ'd\\Þበ' (Insecticide)

ጋናժ° Δ ና»ጋና» CL° Δ ጋናժናበ Δ °Lና PZΓ 'dΛናZ σ ». D°DΓና%CDZ7% 'dΛናZ Δ 7DDZ9% hexachlorocyclohexane (HCH)

A poison that is created to kill only insects. An example of an insecticide is hexachlorochcyclohexane (HCH).

iron (Fe)

A metal that is naturally found underground and mined. Iron is also released to the environment by the activities of people. Iron is silvery in colour but rusts easily and turns orange when exposed to air and water. Iron is the most widely used of all the metals. Iron is magnetic, which means it responds to Earth's magnetic field and to where the north and south poles are located. Compasses contain iron in order to find specific directions (north, east, west, and south). People must include small amounts of iron in their diets to stay healthy.

Lead (Pb)

A soft, blue-grey, easily-worked and melted heavy metal that is naturally present in rocks and soils. It is used to make some kinds of glass, shot for shotguns, and combined with other metals for use in a variety of metallic items. Lead may be released to the environment by human activities, including the former use of leaded-gasoline (in North America, lead was added to gasoline until the 1980s). Lead can be toxic to living things. In animals and people, lead accumulates in the brain and bones.

プラム ずり (Lichen)

A plant-like growth that is actually a combination of a fungus and algae living together. It grows very slowly, lives for a long time,

looks like moss or a crusty dry leaf and can grow on bare rock and soil. Lichen is an important food source for caribou.

トトレノトントトル (long range transport)

J⊂⊂^c (Mammal)

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Mammals are warm blooded animals with backbones. Females produce milk to nurse their young with. Mammals are usually covered in hair but not always. Walrus, seal, whales, polar bears, caribou, muskoxen, muskrat, hare and humans are all examples of mammals.

Mercury is a heavy metal that is naturally present in rocks and soils in combination with other chemicals. It is the only metal that is liquid at room temperature. Its is silvery in colour and flows easily so it is sometimes used in thermometers. There are many human-made sources of mercury that are released to the atmosphere. Also, mercury may be released when soils are flooded in the creation of reservoirs for making electricity.

Mercury is toxic to most living things. It accumulates in the liver, kidneys, hair, and skin of animals and people.

Δ⁶Ρ_C⁶D^c ላ^cP^cP^cP^cA^c (Methylmercury)

Mercury, like other metals, can be found in different chemical forms in the environment. Methylmercury is the form of mercury that is most likely to cause effects. Methylmercury can also bioaccumulate and biomagnify in food webs. Methlmercury can accumulate in the brain.

micrograms per gram (Ug.g. -1)

A very small unit for measuring concentration, sometimes called parts per million (ppm). The amount is like one drop in a fuel drum.

4℃Cdyb\D₹ (Microscopic)

Something too small to be seen with the naked eye, and that can be seen only with the use of a microscope.

nanograms per gram (Ng.g-1)

A very small unit measuring concentration, sometimes also called parts per billion (ppb). It is smaller than micrograms per gram. The amount is like one drop out of all the water in nine full water trucks.

「てごかい (millisieverts)

/'ፇ^ር Δር[®]ሀ ላጋ[®](▷ペ[®])[®] ሷ[®])ና▷(▷[©]) ታ ▷[©] ሷ[®])σ. Γር/[†]ፆ[©] (▷\▷[©] ርペ[©] / [†]ፆ[©].

The siever (Sv) is the unit used to measure radiation doses. A millisievert (mSv) is a thousandth of a sievert.

ĎLゼ[©]σ[%]ὑ^ςbϽ^c (organic)

PLלºσ∿じჼי)ና ለ°ם∿\ჼ \5PNCPጚჼ ÞLלσና ላ'L」 \a/L'_)σ ላσናጋሊተ'σ፞ና፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፞፟፟፟፟፟፟ የጋ∿ቦPፘናየናር፟፟፟ጚ፞፞፞፞፟፟፟፟፟፟፟፟

Organic material is derived from living organisms and is made up of carbon based compounds

ውህበን ሲሚያርና ፈናርና ሲና (OC) (Organochlorines)

CLbddc $\Delta \Delta^{\circ}$ Labus diametric. Diametric diametric by the contraction of the contract

These are chlorine-containing chemicals made by humans. Organochlorines dissolve in fats and oils, and therefore are stored in the fat and blubber of animals (they bioaccumulate) and are passed on through the food chain (they biomagnify). Examples of OCs include: toxaphene, DDT, and chlordane. Organochlorines can be toxic or poisonous to living things.

$\Delta \subset b \setminus b \subset d^{s} \cap b \subset b \cap b \subset (PBEs/BDPEs)$

Polybrominated diphenyl ethers and brominated diphenyl ethers are a group of human-made chemicals that are used as flame retardants in various plastic materials, such as polystyrene.

ሕረአ (PCBs)

 ΔC ΔC

Polychlorinated biphenyls (PCBs) are a group of human-made industrial POPs. There are many different kids of PCBs. Because they do not conduct electricity, PCBs were used as insulators in electrical transformers starting in the 1930s. PCBs do not break down easily in the environment and there is concern that they may be harmful to living things. Some kinds of PCBs are thought to cause cancer and may contribute to other subtle effects in unborn children. The use of PCBs was banned in many countries, including Canada, in the 1970s.

「b>cichocho イイムJeaつAc (perfluorinated acids PFAs)

Perflourinated acids (PFAs) have no known route of degradation or change under normal environmental conditions, meaning that they are extremely persistent in the environment. Examples of PFAs are perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA).

「b>c/ርጎን▷ር/σ Δc▷ና▷ጋ/Lላና▷ 「b▷ραና▷ጋΓ▷ (perfluorooctane sulfonate PFOs)

 6 > $-^{i}$ 4 > 6 $^$

Perfluorooctane sulfonate (PFOS) is an example of a PFA that has recently been found in the liver and blood of polar bears and seals in the Arctic, including some samples from Nunavut. There is concern about the presence of this chemical in the environment

and not known to degrade. PFOS can cause cancer and enlarged livers, as well as affect the fertility of wildlife.

'b>ー / c / c Δ c P c D l L c l l c l l c l l c l l c l l c l l c

Perfluorooctanoic acid (PFOA) is an example of a PFA that has recently been found in the liver and blood of polar bears and seals in the Arctic, including some samples from Nunavut. There is concern about the presence of this chemical in the environment and not known to degrade. PFOA can cause cancer and enlarged livers, as well as affect the fertility of wildlife.

$\Lambda C^{\varsigma} b \Delta^{\circ} \alpha^{\varsigma} \sigma^{\varsigma \circ} D^{\varsigma \circ}$ (persistent)

Persistent, when referring to chemicals, is the resistance of a chemical to degrade or disappear. A persistent chemical, once introduced, stays in the environment for an indefinite length of time.

ペペンマ トレインマ イアクトペックマ (Persistent Organic Pollutants (POPs))

Chemicals that take a long time to break down, can be transported long distances in the atmosphere, and can biomagnify

in food chains. Most POPs are human-made, and many are organochlorines.

⁵dΛPΔ♭PΩ (Pesticides)

Pesticides are poisons used to kill pests (plants or animals that are a nuisance or harmful). There are two main types. Insecticides are used to kill insects while herbicides are used to kill weeds, mould and fungus. Chlordane, toxaphene, and DDT are examples of pesticides.

∠??C▷< (Pollution)

Any human-made substance that can damage the environment (air, water, or on the land).

>ュσト polonium (Po)

Polonium is the most commonly found natural radionuclide and occurs in the rocks and soils of the Earth.

'dΛΡΔϟΡΠ' ሲ'Cσኒι Polychlorinated napthalenes (PCNs)
CLbd ΔL¹¬Δ° ΔCΓϟΡΚ' 75σ° ላጋቴሮቴዮΚσ, 'dΛΡ'δΡԾቴ CΔCΠ'ΓΛ'ΚΠ',
ላጌ ΔΡላኘፒቴዮ ΛΥΛኚΙላቴጋና. አα-ለLσቴዮ ላ½<¬ፌዮ ΛΥΛ ላጌ¬
Σ'dቴαቴጋኄ¬በቴ.

▷'b▷በት▷በናረሳ'σ'⁰/ላ▷ርናረናበሳ'σ'७ (quality assurance/quality control)

Because research is conducted by many different people in many regions across the country, it is often difficult to ensure that data is produced according to the same standards. Quality assurance/quality control is a system of procedures and corrective actions that attempt to ensure that the different research studies, environmental monitoring and sampling, and other technical and laboratory activities can be compared and that the data reported are of the highest quality.

ዾ፞፞፞፞፞፟ዾዹናσናь/ዾ፞በሲጚናь (Radiation)

▷°ፚ'σጭር'ቴጭ<▷> ΔϽϲʹʹΛͰΡΚΨʹϹʹቴጭՈʹʹϽͿ ▷ፚጭϽσቴ. ΡቴϭϲͺLና ΛͰϭϭΓΡͼϧʹΓϲϽͼ ϒʹͰΡσͼʹΓϲ ϹΔLΔϲϽͿϲ ʹϒʹͱϒͰʹͼʹϧϧϲ ϭͰʹϹϽ ϹΔLΔϲϽʹͼϧϦϲϧ ϷͰͼϧϲͼ ʹϼϲϭϲʹʹϽ ϭͰͺͿ ΠΓΡς ΔϽϭϲʹϽϼϲ ϭͰϟϲϷϒΠΠͿϲ. ʹϷʹͿϥϪϲϽͼϭ ʹϧͼϧϹϥϽͿϲ ϭͱʹϹ ϷͰͺͼϭͿϽͼϧϦϧͼ ϭͰͺͿ ϹͿͼϧϧͼ ͼϧϧͼ ͼͼϧϧͼ ͼͼϧϧͼ ͼͼϧϧͼ Αιροκεί Αιροκεί Αιροκεί Αιροκεί Αιροκεί Αιροκεί Ανεφορος. Ενάστος Ανεφορος. Ενάστος Ανεφορος Ανεφορος

トロック マイトコイト・フィ (Radionuclides)

These are small particles that emit radiation. Radionuclides are naturally present in rocks and soils, but can also be introduced to the environment by the activities of people, such as the testing of nuclear weapons, dumping of nuclear wastes, and nuclear accidents (such as the accident at Chernobyl). Radionuclides tend to accumulate in the bones and muscles of animals and people. Natural radionuclides in the Canadian north include lead-210 and polonium-210. Radionuclides made by humans include strontium-90, iodine-129, and cesium-137.

ናዖጋና∿Ր⊳ን⁰ዉ⁰∿Ր⁰σናь (Reproductive Failure)

 $\wedge dG^{(b)}C^{($

The inability to produce young, or a pregnancy that does not result in a successful birth.

ΔΓ^{**^c**}C^{**^c}AC⁻**C^{**^c} (Reservoirs**)</sup></sup>

Human-made lakes created as a result of damming rivers.

deσdibiσib ΔΛσdiaio) (Respiratory Disease)

A disease that affects the lungs and therefore breathing.

ἀσና\ናﻪϽናﻪርናbናL%ὑና ΔϲC▷°Φረ\Φና∩Φናͽ (risk assessment)

The qualitative and quantitative study of the risk posed to human health and the environment by the presence and/or use of specific contaminants.

トレナレσdΔ^c (Sediments)

Pሪጋ Δ° Δ° (ሪኦናሀċና, LናPሪ ላ¹Lɔ ለዖጭጋልጵና σናረበልጵና ላΓላቴሪጌሪቴዮና) ርሪና, dc. duċና. ርሪና Δ° . ርሌዮኃ Δ° ቴዮኒጵና ሪካር.

The material (fine particles of sand, silt, and plant/animal remains) that is found at the bottom of lakes, rivers, streams, ponds, seas, and oceans.

∆d<ናር ሁህት (selenium)

 $\Delta d \Delta^c C^b + \Delta C^b$

Selenium is a non-metallic element that resembles sulphur. It can be naturally found in rock and soils in certain regions. It is thought that at the right level, it may reduce the effects of mercury, but this has not yet been proven.

⊲⊳⁰∩ሌσ^ና (Smelting)

\ልናታ⁶\ΔታΔσ⁶ ላ⁶⁶የ\ታσ⁶ ј_σ⁶_ ለ⁶5 ለታΔσ⁶ ላ⁶⁶በሊσ⁶ ⁶5 የታ⁶⁶0σ⁶.

4⁶⁶0ሊσ⁶ ላ⁶0,14⁶2⁷4C⁶2⁶2⁶5 ላ⁶0,14⁷5 (1) ለታΔσ⁶ 4⁶5 (1) ለታΔσ⁶ 4⁶5

The process of removing metals, such as lead and gold, from rocks by melting. Smelting may result in the unwanted release of metals to the environment.

とうさい (strontium)

Stronium is a naturally occurring radioactive which is used to find out the age of rock and sediments

'bÞCĽና σናዖቦታ⊳ላ°ଦናьጋና (TDI) Tolerable Daily Intake

 $Cd \supset J \supset \Delta J \supset \Delta$

(TDI) Once the NOEL (no observable effect level) is known, and the safety factor is applied, scientists can come up with an estimate of how much of a contaminants a person could receive every day of their life, from all sources, without any significant effects. The amount is known as the Tolerable Daily Intake (also sometimes called the Acceptable Daily Intake). It is reported as the amount of contaminant per kilogram body weight per day.

'dለ'PΔ৮ (toxaphene)

ውህበዖኄሲኄኄቦናጋ፦ጌታ ላናርኄሲኈጋኈ $\mathrm{id}\Lambda$ የንውና ጋና $\mathrm{id}\Lambda$ ታረበታ ላጋኈርኦዺሬኦኈጋኈ 1970-ኄቦኄውና. ጋና id ኄሲጐጋላላ፡ኒ የዕኦትኦኦ/Lርጐጋኈ ለጔላኈጋ୮ኮ id ኄሎጋኄውና. ዕወርΓ ላጋኈርኦላኄ id ስኄሁታ ር id ጎርትርኦጐ/L°ኄቦናጋጐ ላ፡L id 1982-Γና ላΓላርጐbΓ ላጋሊላኄኦዮጵጐበርኦሬኦጐ/L° id ን።

Toxaphene is a POP that was used as a pesticide from the 1950s to 1970s. It is very poisonous to living things, especially fish. Toxaphene has never been licensed for use in Canada, and it was banned in the United States in 1982.

ظُومِطِوْمِهِ (toxic)

የለጋΔ°៤° ለ??CÞ4°៤°°)° ጋ'ፅሃረCÞ4°៤°°)° ٺˆ° ፚዾኈዾና, σኅረበዾና ላለኈቦ°ዾ°ዾ ዾLላዾና. Γρናጋፅጔ፞ሀጔላናጔበ፦ ለ?Δናፈላ?°៤°>°.

Toxic (toxicity) refers to the capability of a substance to cause harm or be poisonous to humans, animals, or other living things. In common usage, the term toxic substances refers to chemical substances that are capable of causing harm at very low levels of exposure.

ব° σ ব ር ና b ሲ ና b ጋ ር L L ሲ b (toxicology)

Toxicology refers to the scientific study of the effects, chemistry, and treatment of poisonous (toxic) substances.

ረፈ_የ (zinc)

ᡃ᠘ᢐᢉᡪᢧᡃᡳ᠅᠂ᡆ᠙ᡴ᠋ᡏ᠌᠈ᢗᠪ᠙ᠫ᠅᠂ᡆᡰ᠋᠘᠙ᡰ᠋᠘ᠸᡥᡣᢗ᠌ᠵᡲ᠊ᡆᡥᢩᠵᠦ᠘ᠴ᠘ᡩ᠕ᠸᡳᠦᡥᢉᡴᠡᢆ᠍ᡝ ᠘ᠴᠸᡶᢅᡕ᠂ᢐᠻᢪᢐ ᢗ᠘᠘᠘ᠫᡝᢐᡳᡆᠻᢐᡃᢛᢅᠵ᠂ᠮ᠙ᠫ᠒ᡰᡶᡙ᠌ᠳᡠ᠂ᡃᢐᠦ᠋᠋ᡰᠻᢐᡃᡆᡥᡳᡗᡃᡳᢗᡐᠴᠦ

A metal found naturally in the environment and released by the activities of humans. People must include small amounts of zinc in their diet to stay healthy.

ΔL▷< ቫትኄισ ቫለጭሮ (zooplankton)

The passively floating or weakly swimming usually extremely tiny animal life in a body of water.